DRAFT

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

PHIPPS OCEAN PARK BEACH RESTORATION PROJECT
TOWN OF PALM BEACH,
PALM BEACH COUNTY, FLORIDA

JULY 2002

Prepared for:

Town of Palm Beach
Palm Beach County, Florida

and

U.S. Army Corps of Engineers
Jacksonville District

US Army Corps of Engineers
Jacksonville District

Prepared by:

Coastal Technology Corporation

and

Dial Cordy and Associates Inc.

COASTAL TECH

DIAL CORDY AND ASSOCIATES INC
Environmental Consultants

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SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

JULY 2002

Regulatory Authorization
Clean Water Act Section 404 and
Rivers and Harbors Act Section 10

PHIPPS OCEAN PARK BEACH RESTORATION PROJECT
TOWN OF PALM BEACH,
PALM BEACH COUNTY, FLORIDA

LEAD AGENCY: Jacksonville District, U.S. Army Corps of Engineers

COOPERATING AGENCIES: Town of Palm Beach, Florida (permit applicant), Florida Department of Environmental Protection, U.S. Environmental Protection Agency, National Marine Fisheries Service, U.S. Fish & Wildlife Service.

This Draft Supplemental Environmental Impact Statement (DSEIS) describes the selected plan and the alternatives evaluated to provide shore protection for the shoreline surrounding Phipps Ocean Park within the Town of Palm Beach, Florida. The recommended plan is intended to: (1) mitigate the long-term erosion impacts of Lake Worth Inlet and armored coastline north of the Project area; (2) provide and maintain storm protection to upland improvements; (3) restore and maintain the beach for public recreational use; and (4) restore and maintain the beach for marine turtle nesting habitat. The plan includes placement of approximately 1.5 million cubic yards of fill over approximately 1.9 miles of beach, between DEP Monuments R-116 and R-126 and installation of 3.1 acres of hardbottom reef. Sand compatible with the existing beach will be obtained from borrow areas located approximately 3,500 feet offshore and between 1.5 and 2.6 miles south of the fill. Geotechnical analysis of the borrow area indicates that the material is suitable for the restoration of Phipps Ocean Park beach and suitable for use by nesting sea turtles and subsequent hatching success. The borrow areas have been designed with buffer zones to avoid impact to hardbottom communities in the vicinity of the borrow areas. Mitigation of hardbottom resources within the fill area is required and has been incorporated into the plan.

For more information, contact Dale Beter, SEIS Team Leader,
U.S. Army Corps of Engineers, Regulatory Branch, 400 North Congress Avenue, Suite 130, West Palm Beach, Florida 33401; phone (561) 686-3441 or facsimile 561-683-4941.Additional comments must be received by [date].

U.S. Army Corps of Engineers
Jacksonville District

EXECUTIVE SUMMARY

DRAFT
SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

REGULATORY AUTHORIZATION
COE SECTION 10 AND SECTION 404 PERMITS

PHIPPS OCEAN PARK
BEACH RESTORATION PROJECT
TOWN OF PALM BEACH,
PALM BEACH COUNTY, FLORIDA

Project Description. The Phipps Ocean Park Beach Restoration Project (Project) entails the placement of 1.5 million cubic yards of sand to restore 1.9 miles of beach within the Town of Palm Beach immediately south of Sloan's Curve, with construction of an artificial reef proposed as mitigation for unavoidable impacts to nearshore hardbottom. The fill area extends between Department of Environmental Protection (DEP) Monuments R-116 and R-126.

The fill design profile includes a constructed berm width of approximately 140 to 330 feet with a dry beach width (distance to the MHW) of approximately 198 to 380 feet. The projected toe of fill extends approximately 280 to 540 feet offshore and will unavoidably impact approximately 3.1 acres of nearshore hardbottom located immediately adjacent to the shoreline. Fill is proposed to be obtained from two offshore borrow areas located approximately 3,500 offshore and between 1.5 and 2.6 miles south of the fill area. Fill will be transferred from the borrow areas to the fill area by hydraulic dredge; construction by hopper dredge will not be allowed to avoid impacts to hardbottom biological communities in the vicinity of the borrow areas.

Need or Opportunity. The Project is located on the southeast Florida coast within Palm Beach County. The proposed work is consistent with the *"Comprehensive Coastal Management Plan Update - Palm Beach Island, Florida"* (June 1998) and the *"Coast of Florida, Erosion and Storm Effects Study - Region III, with Final Environmental Impact Statement, U.S. Army Corps of Engineers, Jacksonville District"*, October 1996. The Project is needed to mitigate the long-term erosion impacts of Lake Worth Inlet and the erosion impacts of the armored coastline north of the Project area, provide and maintain storm protection to upland improvements, restore and maintain the beach for public recreational use, and to restore and maintain the beach for marine turtle nesting habitat.

The Florida Department of Environmental Protection (FDEP) has designated all of the Project area from R-116 to R-126 as an area of "critical erosion." This designation is based on (a) the

erosion attributable to the influence of Lake Worth Inlet and the adjacent armored shoreline and (b) the existing headland features surrounding the Project area.

Shoreline conditions and structures updrift of the Project area exacerbate erosion and, if action is not taken, will lead to significant future erosion of the Project area and the shoreline further south. Net longshore sand transport in the region is to the south. Construction of the Inlet and Inlet jetties interrupts the longshore flow of sand and sand starves the region south of the Inlet leading to the construction of seawalls, groins, and eventually a rock revetment constructed by the Florida Department of Transportation (FDOT) north of Sloan's Curve in 1987. The revetment has cut-off the sand supply from the dune landward of the revetment. These conditions are expected to continue to contribute to the erosion within the Project area in the future.

The three miles of shoreline immediately north of Sloan's Curve are fronted by numerous armoring structures including rock revetments, seawalls, and groins. The existing groins north of Phipps Ocean Park deter southerly longshore transport to Phipps Ocean Park and the Project area. The Mid-Town Beach Restoration Project is located to the north of this three-mile segment; the groins and armoring have impeded the southerly migration of the Mid-Town sand. In combination with the effects of Lake Worth Inlet, armoring structures have caused a longshore transport and sediment deficit to the Project area, resulting in erosion, loss of the recreational beach, increase in the storm damage risk to upland property, and loss of sea turtle nesting habitat.

Major Findings and Conclusions. The proposed action is in the national interest and can be constructed while protecting the human environment from unacceptable impacts. Benefits of the proposed action would be to mitigate the long-term erosion impacts of the Inlet and the erosion impacts of armored coastline north of the Project area, provide and maintain storm protection to upland improvements, restore and maintain the beach for public recreational use, and to restore and maintain the beach for marine turtle nesting habitat. The primary adverse impact of concern is the potential impact to hardbottom resources, particularly to ephemeral intermittently exposed nearshore hardbottom features in the fill area. Other adverse impacts include increased turbidity and sedimentation in the vicinity of the borrow sites (including reefs in the vicinity of the borrow areas) during construction, increased sedimentation and turbidity along the nearshore environment during construction and potential impacts on hardbottom habitat for managed fish species. Measures taken to avoid, minimize, and compensate for adverse impacts include reducing the fill placement area to avoid nearshore hardbottom resources, use of buffer zones and strict construction vessel control requirements to avoid and minimize impact to hardbottom resources in the vicinity of the borrow areas, and installation of a 3.1 acre mitigation reef in water depths ranging from -5 feet to -13 feet north of the Project area. Specific mitigation measures associated with the dredging operations include no anchoring within 200 feet of the offshore hardbottom, no dredging within 400 feet to 524 feet east of the westerly limits of the offshore hardbottom, delineation of the borrow area with lighted buoys, use of a real time geo-positioning system on the dredge, diver assisted dredge anchor placement during day light hours only, monitoring of turbidity and sedimentation, use of manatee observers, and sea turtle monitoring.

Alternatives. Alternative plans evaluated in the SEIS include, (1) the "No-Action" Alternative, (2) beach nourishment and periodic renourishment in combination with groin structures, and (3) beach nourishment with periodic renourishment. Alternative sand sources considered include offshore borrow areas located approximately 3,500 feet offshore and between 1.5 and 2.6 miles south of the fill area mid-point, deepwater sand sources, upland sand sources, foreign sand sources, and sand from maintenance dredging of adjacent inlet ebb and flood shoals.

Preferred Alternative. The Preferred Alternative includes a combination of beach nourishment with periodic renourishment and construction of a 3.1 acre mitigation reef. The optimum plan for improvement consists of placement of 1.5 million cubic yards of sand over 1.9 miles of beach immediately south of Sloan's Curve between DEP Monuments R-116 to R-126. The optimum design profile includes a construction berm width of approximately 140 to 330 feet with a dry beach width (distance to the MHW) of approximately 190 to 380 feet. The projected toe of fill extends approximately 280 to 540 feet offshore. The preferred mitigation reef structure will best provide for the "like-kind" mitigation of the existing hardbottom impacted by the Project and accommodate species that use the impacted hardbottom.

Issues Raised by the Public and Agencies. In addition to the potential adverse impacts identified in the "Major Findings and Conclusions" statement above, some agencies and public commenters raised other concerns during the scoping process. Generally, the additional concerns related to the quantification of hardbottom resources in the vicinity of the Project, the functions and values of hardbottom features, potential secondary and cumulative effects of beach nourishment projects on hardbottom resources in the vicinity of the Project, impacts to essential fish habitat, potential of hardbottom in the borrow area dredge limits, and potential public safety concerns associated with the nearshore or shallow hardbottom mitigation reefs. Residents expressed concern with the extent of shoreline erosion, the threat of erosion to upland property and infrastructure, and the "No-Action" Alternative.

Areas of Controversy. The most significant area of controversy, as evaluated in this SEIS, concerns the functions and values of nearshore hardbottom features, the immediate and long-term impact of burying nearshore hardbottom in the fill area, and the effectiveness of the mitigation to compensate for the resource impacts of the Project.

Unresolved issues. At the time the preliminary draft SEIS was prepared, the extent, location, and quantity of mitigation reef necessary to offset impacts to nearshore hardbottom impacts had not been fully resolved. This issue is evaluated in Section 4.7, Hardbottom Resources.

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